

# W5YI REPORT

Up to the minute news from the worlds of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

## Dits & Bits

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"One of the fundamental purposes of amateur radio is to maintain a pool of operators, technicians and electronics experts. In light of the apparent downward trends in Novice operators, we are concerned that a valuable national resource is being diminished. Accordingly, we will propose rulemaking in the hope that an enhanced Novice license will benefit the service and reverse the trends." ...from FCC Notice of Proposed Rule Making - PR Docket 86-161.

## FCC PROPOSES VOICE PRIVILEGES FOR NOVICES!

Amateur operators crowded the early morning FCC Forum at the Dayton HamVention's on Sunday, April 27th, eagerly awaiting details of Novice Enhancement. Most knew it was coming. A short press release had been issued just a couple of days earlier stating that the FCC had indeed approved the proposal as written by their staff. The measure was rushed through the various Commissioner's offices just a few days earlier in the week - an approval procedure known as the "circulation route" - so that it could be announced at Dayton, the world's largest assembly of ham radio operators. We were there.

### BACKGROUND ON THE NOVICE CLASS

Most newcomers to the hobby are disappointed at being initially restricted to Morse code operation when they enter the ham ranks at the Novice level particularly when their main interest is voice or computer operation.

The attrition rate at the Novice level is high! (See Table #1) Sad to say, a staggering two thirds of all Novices eventu-

ally drop out of ham radio without ever obtaining the voice privileges they dearly desire. Even more of a problem to the future of ham radio is the declining numbers of new Novices entering Amateur Radio. It is becoming an old man's pursuit. The average ham age is well up in years when in reality it should be in the teens and twenties!

Table #1	Fiscal	Fiscal	Fiscal	3-Year
NOVICES:	Year 83	Year 84	Year 85	Total:
New Novices:	18,744	17,392	15,913	52,049
Dropped Out:	9,129	14,883	9,615	33,627
Year End:	86,781	80,461	76,337	-10,444
(FCC Personal Radio Branch, Washington, D.C.)				

The FCC statistics published here tell the story! There are more than ten thousand less Novice operators than just two years ago! The wash out rate is 64.6%! New blood is needed if amateur radio is to continue as we know it. Many commercial groups say they need need more spectrum and point to the declining numbers of new Novices and the stagnated Amateur Radio Service in general. They want the frequencies we have.



The FCC views a growing Amateur Radio Service as a healthy service. While some blame the decline in new amateurs to the bottom of sunspot cycle and its accompanying poorer band conditions, the fact is that the Amateur Radio Service is anything but healthy! Reliable VHF and higher frequency communications for the most part aren't affected by propagation. Current Novice activity is pretty much limited to a small sliver of the 40 and 80 meter bands which suffer from Canadian amateur phone operation and international broadcast activity. Stated simply, Novices are disillusioned and disappointed with Amateur Radio!

Voice privileges for Novices won't be precedent setting. They had two meter (145-147 MHz) telephony privileges back in the sixties when VHF was considered "experimental" and repeaters were unheard of. The technology just wasn't there. A lot has changed since then! What was once a Morse code and AM phone hobby is now FM/SSB telephony and digital operation. The new generation must be attracted to ham radio with benefits that reflect the changes.

Technician Class amateurs will also reap the benefits of any additional Novice privileges since they automatically receive all rights available to the Novice operator.

### HISTORY OF NOVICE ENHANCEMENT

The American Radio Relay League was far from the first to petition the FCC for expanded Novice privileges. Larry W. Garens, KC5OQ, of the small west Texas community of Brady, deserves the credit as being the initial author of Novice Enhancement.

He filed four petitions for it with the FCC before the ARRL filed their proposal. Garens' petitioned to expand the operating privileges for Novice operators by allowing telegraphy, RTTY and voice privileges in the ten meter band and code and voice between 220-225 MHz.

Garens' filed a fifth petition (after the League jumped on the bandwagon) suggesting the addition of the 902-928 MHz band to the Novice Class. The League's petition for Nov-

ice enhancement is basically the same as that envisioned many month's earlier in the Garens' proposals.

### WHAT DID THE ARRL PROPOSE?

On June 6, 1985, the ARRL proposed to provide greater motivation for amateurs-to-be to obtain their first license, without reducing the incentive to upgrade by attaching too many privileges to what is, and should continue to be, an elementary license.

The League suggested Novice voice and data privileges sufficient to permit communication with other local amateurs and to provide an occasional opportunity for long-distance communications. The essential elements of the ARRL petition were:

- (1.) Authorize Novice control operators digital communication privileges in the 10 meter band on frequencies 28.1 to 28.3 MHz, 200 watt output PEP;
- (2.) Authorize Novice control operators emission J3E (sideband voice) privileges in the 10-meter band on frequencies 28.3-28.5 MHz;
- (3.) Authorize Novice control operators frequencies in the entire 1.25 meter band (220-225 MHz) with all emissions authorized for that band and with a transmitter power limit of 25 watts.
- (4.) Stations in 220-225 MHz. repeater operation may retransmit the signals of Novice stations, but no Novice licensee may be the control operator of a repeater;
- (5.) Authorize Novice control operators frequency privileges in the 0.23 meter band on frequencies 1246-1260 MHz with a power level of 5 watts similar to the conditions proposed for the 1.25 meter band.
- (6.) Operators authorized higher power levels now in the 10 meter, 220-225 MHz and 1246-1260 MHz subbands should be allowed to continue. General Class and higher would be authorized full amateur (1500 watt PEP) power in the 28.1-28.2 MHz Novice subband where a 200 watt power limitation now exists. (The FCC asked for public comment on this.)

I am a currently licensed Extra Class amateur radio operator and wish to be a volunteer examiner. I have never had my station or

WOULD YOU LIKE TO BECOME A VOLUNTEER EXAMINER? under "The W5YI Report" Program? If so, please send a copy of your Extra Class license, this signed statement, and a SASE



## NEW NOVICE TEST OUTLINE SUGGESTED

The League suggested that the Novice written examination (Element 2) be expanded to include topics about digital communications and telephony techniques. The ARRL said this was necessary so that the examination would include the new Novice privileges granted. The League also asked that the written test be expanded to thirty questions and the question pool (P.R. Bulletin 1035A) from which these questions are selected be increased to 300 questions.

To preserve the integrity of the Novice examination the ARRL said that each examination for the Novice class operator license should be administered by two volunteer examiners holding General class licenses or above, rather than the presently required one examiner.

## FCC ISSUES NPRM

The Commission's Notice of Proposed Rulemaking provides for basically the same features as proposed by the League. It was very well received by those in attendance at Dayton.

The FCC did caution the amateur community, however, regarding the 220-225 MHz band. They said that it must be recognized that there are three petitions seeking spectrum from this amateur band - two seeking narrowband land mobile operation and another from a "reading for the blind" organization.

In view of this, the FCC said that they will not be finalizing the matter of permitting Novice operators in the 220-225 MHz band until these petitions are resolved. Any Novice operation authorized must necessarily be on an interim basis pending resolvment of the 220-MHz issue.

The FCC did publish new tentative §Part 97 rules, however, authorizing Novice and Technician access to:

28100-28500 kHz - Morse Code, Digital Info.  
200 watts PEP output

28300-28500 kHz - Single Sideband Voice J3E  
200 watts PEP output

220-225 MHz - All current amateur modes  
25 watts PEP output

1246-1260 MHz - All current amateur modes  
5 watts PEP output

Novice class operators may not be the control operator of an amateur radio station in repeater, auxiliary or beacon operator.

It must be emphasized that these rules are FCC proposed. They will become permanent if the FCC adopts their NPRM. The general feeling is, however, that we will indeed see some firm enactment of enhanced Novice privileges by year end. The effect on the Amateur Radio Service could be dramatic! Our informal survey at Dayton indicates, however, that not everyone is in favor of a large expansion of the ham ranks - especially those active on the 220-225 MHz band.

The FCC did not go along with the ARRL's suggestion that two examiners administer Novice examinations and invited comments on this issue. "Integrity of the license is important, but we are not convinced that two examiners is the right safeguard to employ."

The FCC did feel that "Including Novices in the Volunteer Examination System has merit, but we are reluctant to disturb the present procedure under which aspirants to amateur radio receive licenses quickly and free of charge." The FCC also said that they were unsure of the capacity of the VE system to handle a large volume of applicants.

## ALTERNATIVE PLAN PROPOSED BY FCC

A novel approach was also suggested by the FCC in the NPRM - that being to split the present Technician class examination into two sections - separate MF/HF and VHF/UHF questions. "It would be a simple matter," the FCC said, "to rearrange the topics into two syllabi: Element 3(A) for VHF and UHF; Element 3(B) for MF and HF. Element 3(A) would be a written test requirement for a Technician-and-above license. Element 3(B) would be a written test requirement for a General-and-above license."

The present Element 3 covers both

come from this and would appreciate it if you would publish our small classified ad (see margin between pages 4 & 7) on license preparation materials. Thanks!

WOULD YOU DO US A FAVOR?



VHF/UHF and high frequency operation. Basically what the FCC's alternative proposal suggests is a simpler examination for Technician class than is now the case.

The 90 day public comment period on the Notice of Proposed Rulemaking closes on July 16th.

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### REPEATER FREQUENCY COORDINATION....

The other FCC Rule Making announced at Dayton had to do with Frequency Coordination of Repeaters in the Amateur Service - Docket 85-22.

### BACKGROUND - REPEATER COORDINATION

Fifteen months ago, the FCC released a NPRM proposing to grant preferred status in instances of harmful repeater-to-repeater interference to amateur repeater operators whose repeater input and output frequencies had been recommended by a recognized frequency coordinator.

Rules were also proposed that would impose equal responsibility on repeater operators of similar status (both not coordinated or both coordinated) to mutually resolve instances of harmful interference. The rules were intended to reduce the number of repeater interference disputes that the FCC ultimately gets involved in.

The FCC has followed through by releasing (on May 2nd) a Report & Order essentially adopting their original proposal. The Commission decided against requiring coordination as a condition prior to repeater operation and also decided against adopting more detailed repeater coordination rules. The FCC did say, however, that more comprehensive measures would be considered if the rules adopted do not resolve the repeater interference problem adequately.

### WHAT DID THE COMMENTS SAY?

The FCC received some sixty-four comments on the NPRM - primarily from the amateur volunteer coordination community. Comments covered many issues including:

- ¶ ...geographical scope of repeater coordination;
- ¶ ...the necessity for a national repeater "umbrella organization";
- ¶ ...whether technology advancements could resolve repeater interference problems;
- ¶ ...the appropriate use of the ARRL repeater directory;
- ¶ ...whether a national data base is needed;
- ¶ ...powers of the local coordinator;
- ¶ ...role of FCC involvement in the coordination process;
- ¶ ...open and closed repeaters and band plans.

Some commenters argued that repeater coordination is in total opposition to the §Part 97.63 principle that individual frequencies are not specified in the Amateur Radio Service. The FCC responded by stating that repeater operation "inherently requires operation on established fixed frequencies."

"Amateur repeater operation is not frequency agile, as are other types of amateur station operation. As a result, most amateur operators have been willing to voluntarily cooperate to avoid interference to frequencies designated for repeater operation in the Amateur service in favor of the greater good, particularly since many amateur repeaters are open to all amateur operators who desire to use them," the FCC wrote in their opinion. "This cooperation has taken the form of adherence to the determinations of local frequency coordinators. While no amateur operator or amateur station 'owns' a frequency, this type of coordination is the minimum joint effort by the amateur community needed to facilitate repeater operation in the Amateur Service."

The FCC also...

- ¶ ...decided against the concept of a single national coordinator;
- ¶ ...urged local coordinators to participate in a regional or umbrella entities;
- ¶ ...decided not to require amateur repeaters be coordinated without first determining whether the rules adopted will suffice;
- ¶ ...refused to mandate any spectrum efficient technologies (such as tone-operated squelch) which would reduce or solve repeater interference problems. "Interference problems in the Amateur Service



must be determined on a case-by-case basis by the local or regional coordinator," the FCC said;

- ¶ ...refused to require a national data base of coordinated amateur repeaters, but commended the ARRL for agreeing to establish and maintain a computerized data base of the nation's repeaters;
- ¶ ...refused to get involved in the functions of local repeater coordinators. "We seek to promote the voluntary resolution of repeater interference disputes at the local or regional level by amateurs themselves in the finest tradition of the Amateur Service. ...it is important to support the decision of the local coordinator";
- ¶ ...refused to officially recognize specific local or regional coordinators. "It is essential that repeater coordinators respond to the broadest base of local amateurs and consider the concerns not only of repeater owners but also of those users of spectrum affected by repeater operation";
- ¶ ...refused to abolish closed repeaters. "We are not of the view ...that closed repeaters are any more or less desirable than open repeaters";
- ¶ ...refused to adopt rules to formulate national band plans or to require them. "As a general proposition, we favor voluntary band plans over Commission-imposed subbands in the Amateur Service. Rule-mandated band plans may result in inflexibility, increased enforcement burdens and greater regulatory burdens";
- ¶ ...agreed to include auxiliary operation along with repeater operation in the context of the new coordination rules;
- ¶ ...made coordinated repeaters "secondarily responsible" for resolving interference from non-coordinated repeaters. "Although the focus must be placed ...upon the non-coordinated repeater to resolve ...interference, we are adopting our proposed rules which continue to make the coordinated repeater secondarily responsible. This permits local coordinators and the FCC to consider technical alternatives, questions of equity, and spectrum efficiency in reaching the most reasonable solution."

The new §Part 97.3 Rules which take effect July 12, 1986, defines:

**"Coordinated station operation** - The repeater or auxiliary operation of an amateur station for which the transmitting and receiving frequencies have been implemented by the licensee in accordance with the recommendation of a frequency coordinator.

**Harmful interference** - Interference which seriously degrades, obstructs or repeatedly interrupts the operation of a radiocommunication service.

**Frequency coordinator** - An individual or organization recognized in a local or regional area by amateur operators whose stations are eligible to engage in repeater or auxiliary operation which recommends frequencies and, where necessary, associated operating or technical parameters for amateur repeater and auxiliary operation in order to avoid or minimize potential interference."

§Part 97.85(g) is revised to read:

**"Repeater operation** - Where an amateur radio station in repeater or auxiliary operation causes harmful interference to the repeater or auxiliary operation of another amateur radio station, the two stations are equally and fully responsible for resolving the interference unless one station's operation is coordinated and the other's is not. In that case, the station engaged in the non-coordinated operation has primary responsibility to resolve the interference."

(Condensed from 12 page FCC Report & Order adopted 4/21/86, PR Docket 85-22.)

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## MARCH VE PROGRAM STATISTICS....

	<u>March</u>	<u>1985</u>	<u>1986</u>
No. VEC's:		*64	*76
No. Testing Sessions:		252	342
No. Elements Administered:		6178	6839
1986 ARRL -	60.5%		
W5YI -	11.0%		
CAVEC -	7.4%		
DeVRY -	4.4%		
All Others -	16.7%		
Year-to-Date Elements Adm:	14896		15501
No. Applicants Tested:	4177		4637
1986 ARRL -	60.2%		
W5YI -	10.7%		
CAVEC -	7.5%		



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[Continued:]      March      1985      1986

DeVRY - 4.7%  
 All Others - 16.9%  
 Year-to-Date Appl. Tested: 6230      7662  
 Pass/Upgrade Rate, All: 56.3%      62.2%  
 Pass/Upgrade Rate, W5YI: 62.6%      62.7%  
 Persons Per Session: 16.6      13.6  
 Persons Per Session, W5YI: 12.3      10.2  
 No. Elements Per Person: 1.48      1.47  
 No. Sessions Per VEC: 3.94      4.50  
 \* = The FCC considers ARRL, W5YI, DeVry and Metroplex to be 13 VEC's each since VEC's are appointed on a regional basis.  
 [Source: FCC, Washington, D.C. 20554]

## AMATEUR RADIO CALL SIGNS...

issued as of the first of May 1986:

Radio District	Gp."A" Extra	Gp."B" Advan.	Gp."C" Tec/Gen	Gp."D" Novice
0	NS0C	KE0FJ	N0HBW	KA0WSQ
1	NE1V	KB1YG	N1ECO	KA1LD
2	NR2H	KD2SX	N2GHH	KB2APW
3	NA3Z	KC3WS	N3EXC	KA3PLS
4	AA4SV	KJ4UA	N4NZP	KB4TAJ
5	WK5M	KF5MJ	N5JFB	KA5ZSD
6	WS6X	KI6FD	N6NOW	KB6MRM
7	NU7J	KE7QA	N7IEL	KA7YUT
8	NR8M	KE8FF	N8HKO	KA8ZLS
9	NK9L	KD9WX	N9FUU	KA9VIX
N.Mariana I	AH0E	AH0AC	KH0AI	WH0AAG
Guam	AH2W	AH2BI	KH2CB	WH2AJC
Johnston Is.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Hawaii	[†]	AH6GY	NH6GA	WH6BIB
Kure Is.			KH7AA	
Amer.Samoa	AH8B	AH8AB	KH8AD	WH8AAW
Wake Wilkes Peale		AH9AC	KH9AB	WH9AAE
Alaska	[†]	AL7HX	NL7IB	WL7BKG
Virgin Is.	KP2O	KP2AZ	NP2BT	WP2AET
Puerto Rico	WP4Q	KP4KE	NP4UM	WP4FKW

(NOTE: [†] All Group "A" call signs have been assigned in Hawaii and Alaska. Group "B" format call signs now being issued to Extra Class amateurs in these two states.)

## REPORTING THE WEATHER VIA HAM RADIO

The FCC in Seattle recently received a complaint from an amateur radio operator who

reported that one of their local TV weathermen was using amateur radio operators to assist him in reporting the weather for the State of Washington.

The weatherman provided the amateur radio operators with rain gauges and the amateurs collected weather data and then called the weatherman on their radios each morning to report the information. The amateur operators who assisted the weatherman were called "Harry's Hams."

Gray F. Morris, of the FCC's Bellvue, Washington, district office let the weatherman know that he was in violation of §Part 97.110 which prohibits business transmissions by amateurs except for emergency communications. §Part 97.3(w.) defines "Emergency communication. A non-directed request for help or a distress signal relating to the immediate safety of human life or the immediate protection of property." Routine weather reporting simply is not permitted by the rules.

And the same goes for weather reporting by amateurs directly to the National Weather Service or the actual involvement of NWS personnel in amateur or RACES weather networks. Routine weather reporting to the NWS is clearly prohibited. While the agency is not commercial in nature or profit motivated, the fact remains that NWS personnel earn their living reporting the weather.

Assisting the National Weather Service during periods of anticipated or actual severe storms relates to the safety of life and/or property and is permissible. RACES (Radio Amateur Civil Emergency Service) rules (§Part 97.191(a) specifically provide for "communications concerning impending or actual conditions jeopardizing the public safety." Special arrangements can even be made for non-amateurs to operate stations during RACES networks. §Part 97.169(a)

¶ The Commission's year-long crackdown on illegal CB equipment continues. During March the FCC investigated over 400 cases involving Citizen's Band linear amplifiers resulting in \$52,000 in fines to operators and \$10,000 in fines to marketers of unlawful equipment. Local FCC offices are still seeking information on CB operators that cause interference.



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## FATHER-SON ILLEGAL HAM OPERATION....

Albert Kuklin of Tucson, Arizona, and his son, Eugene S. Kuklin, K7KCA, of Apache Junction have both paid FCC fines totalling \$1,050 involving unlicensed transmissions through a 2-meter amateur radio repeater located in Tucson.

After a lengthy investigation last fall, agents of the FCC's Douglas, AZ, office located the source of transmissions being identified as K9LUX at the home of Albert Kuklin. During a subsequent inspection of Kuklin's station, he revealed that his son, Eugene, had installed the illegal station and instructed him in its use, including the use of the call sign K9LUX. The call sign K9LUX had been issued to an amateur in Illinois but is not presently assigned.

Albert was charged with operating an unlicensed amateur radio station and his son with "aiding and abetting the violation of FCC Rules and Regulations, transmission of a false call sign and communication with an unauthorized station."

Albert Kuklin paid a \$750 fine and Eugene/K7KCA paid a \$300 fine and voluntarily surrendered his amateur license for a period of six months. Kuklin will regain his license on June 24, 1986.

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## AMATEUR OPERATORS FINED \$1,000 EACH

Three licensed amateur radio operators were found to be operating in the "never-never" land between CB channel 40 and the bottom of the ten meter ham band by the FCC's Langhorne, PA, district office.

\$1,000 fines have been imposed against Joseph W. Bosak, N3DFD (Advanced) and Technician class amateurs, Adrian J. Post, KA2YIN, and Walter Leddick, Sr., N3DXP, for communicating in the 26.165 to 26.770 frequency band.

This spectrum is allocated for use only by the U.S. Government and the Auxilliary Broadcasting Service. Bosak and Leddick are from Philadelphia, Post from Maple Shade, NJ.

## FCC REFUSES COMPLAINT DATA RELEASE

The FCC has denied the Freedom of Information Act request of Elsie M. Bartus seeking the identity of an individual who had filed a complaint against her with the Commission's Detroit district office alleging interference from her CB radio operation.

The FCC denied FOIA access to the complainants name and data based on "Exemption 7(D)" which applies to civil, criminal and administrative enforcement proceedings "protecting the name and other identifying details which might reasonably be found to lead to the disclosure of a confidential source."

"...to disregard ...requests for confidential treatment would impede the Commission's investigative efforts and ability to obtain similar information in the future, as well as enable possible retaliation against such sources," the FCC said in an April Memorandum Opinion and Order.

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¶ New "ADVANCED CLASS QUESTION & ANSWER MANUAL is now available from W5YI; P.O. Box #10101; Dallas, Texas 75207. Cost is \$5.00 plus \$1.50 postage. The Advanced Class questions/answers for ARRL tests is changing June 1st - for W5YI examinations on July 1st. We are allowing the previous examination material to be used for an additional month. Both VEC programs use the same questions and answers for all examination elements administered - as do most other VEC's. Most changes in the new Advanced tests are minor clarification revisions. We also strongly suggest the new FCC RULE BOOK - Cost \$4.00 plus \$1.50 first class postage.

¶ NEED A CODE TAPE? - We have four different ones available: Cost: \$4.95 + \$1.00 each for same day 1st Class postage shipping  
"Learn the Code Tape" teaches the characters  
 5-7 words per minute - Novice Practice Tape  
 13 words per minute - General Practice Tape  
 20 words per minute - Extra Practice Tape

¶ "HANDS ACROSS AMERICA" pretty much proceeding on schedule. Both Nancie Crincoli, KB2AKG, and Charles Kosman, WB2NQV, had a booth at Dayton. They were



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actively recruiting ham operators to assist with communications for the May 25th event when 6 million Americans will pay \$10 to hold hands from Los Angeles to New York.

¶ Nolan Bushnell (inventor of "Pong" the first video game and founder of Atari Corp.) and Steve Wozniak (inventor of the Apple Computer) are teaming up in a joint venture to design and market electronic gadgets for the home. Both multimillionaire geniuses have had recent business failures - i.e. Pizza Time Theatres, Inc., and rock concerts.

¶ Tandy Corporation has signed an agreement to market "True BASIC" - an improved and improved computer language by the inventors of BASIC, John G. Kemeny and Thomas E. Kurtz.

¶ President Reagan has signed legislation that establishes "cost of regulation" (license) fees ranging from \$20 to \$18,000 for users of the electromagnetic spectrum. Private liesure users (including amateur radio) are exempted. Law takes effect 360 days after signing and also authorizes FCC funding for 1987. The cost-of-regulation fees are expected to raise some \$30 million a year.

¶ An important antenna decision could be rendered in federal court thanks to PRB-1. John Thernes, WM4T, tower case was remanded back to the District Court when an appeals court citing PRB-1 overturned the lower court decision. The Northern Kentucky Tower Fund has been set up to assist John with legal expenses. (P.O. Box #17721, Lakeside Park, KY 41017) He made a presentation at Dayton.

¶ We understand that Mexico and the U.S. are steadily moving toward a reciprocal amateur licensing agreement. XE2IZ/Chris advises that the Secretary of Telecommunications and Transport in Mexico City now has such an agreement in his office. It is not known if the agreement is for "automatic reciprocity" such as now exists with the government of Canada.

¶ New §Part 97.71 Spread Spectrum rules take effect on June 1st. Spread spectrum emission may be used on all amateur bands above 420 MHz to facilitate rather than obscure the meaning of the communications.

### W2NSD/1 ON RE-ENTERING HAM PUBLISHING

Wayne Green's response to why he is back in the "73 Magazine" publishing business again... (Taped at Dayton HamVention)

"I sold out to CW Communications and either they make a profit or they get out. "73" was not making much of a profit so they got out ...I took it back."

"Why did I do that? I had been very worried about the United States not having adequate engineers and technicians. Our output of engineers is no larger than it was 25 years ago yet electronic technology has increased a thousand times. As a result we have lost all of our consumer electronic industries to Japan. The major push to this whole thing is fueled by amateur radio. Seventy-five percent of all the new hams used to be teen agers and eighty percent went on to high-tech careers. Less than 16% of new amateurs last year were teen agers. Less than 5% were 14 and 15 year olds ...it used to be 50%. I want to do something about that. We need a magazine to help make that happen ...to have a base from which to work ...to have some clout in the industry ...to get amateur radio growing. Without a magazine I would not stand a chance. With it, I may be able to do it."

"I want to get every amateur radio club in the United States to feel strongly the responsibility for "Elmering" a school radio club. Back in the 40's and 50's we had thousands of school radio clubs. This is what made it possible for all of these youngsters to enter amateur radio. The kids would get interested in the hobby and join the radio club in school... In the 60's, virtually all of those clubs folded as well as the regular radio clubs. Clubs got going again in the 70's as a result of repeaters. We have to rebuild this whole infrastructure that made it possible for youngsters to get into amateur radio. That means getting radio clubs started in schools again. The only way I can see to do it is to put the responsibility on the current radio clubs. I talked to the ARRL ...Senator Goldwater ...the ham industry and they are all very supportive and excited about it. I think we will move ahead."

"Not one to put my eggs all in one

DO YOU EXCERPT OR QUOTE FROM "THE W5YI REPORT?"

WOULD YOU DO US A FAVOR?



basket, I am also working to get a course in the fundamentals of electronics into our schools for every kid in the United States in Grades 5 through 12. We plan to do this with a monthly magazine ...a self teaching course."

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## VIDEO TERRORIST OVERRIDES HBO SIGNAL

Captain Midnight (who hasn't been on the broadcast airwaves in some four decades) preempted the late Sunday evening (satellite delivered to cable systems) HBO movie April 27th for about five minutes. A video terrorist simply commandeered the east coast HBO feed by beaming a high power character-generated broadcast quality message powerful enough to overwhelm HBO's transponder.

His message was a clear protest aimed at the scrambling and marketing of satellite programming to the more than a million plus private back yard dish owners. The message said "Goodevening HBO from Captain Midnight. \$12.95? No way! (Showtime/The Movie Channel Beware!)" HBO began scrambling its signal on January 15th and offering its programming to private TVRO owners for \$12.95 a month.

Overtaking a satellite transponder isn't difficult to do. Most programmers use only enough power to saturate a transponder. The transponder simply downlinks what it receives. Like FM, the highest powered signal is captured and retransmitted. Superstation WOR also has complained of what it believes to be intentional jamming of its programming.

Captain Midnight, whoever he is, has left himself open to a fine of up to \$10,000 and a year in jail. Both the criminal division of the U.S. Justice Department and the FBI are intensely investigating the incident.

At first amateurs were suspected until it became apparent that only a very high power sophisticated commercial uplink station costing several hundred thousand dollars would have the capability to override HBO's signal. The Dallas Morning News said the Justice Department in Washington indicated they were looking for Captain Midnight in North Texas. Some individuals have already been questioned here.

Getting information about the incident and the investigation has been difficult. Inquiries are being routinely referred to the FCC's Bill Russell in Washington who was "unavailable" for comment when we called. A return call from a Ms. M. Peratino yielded a lot of worthless "No comments" and "We can't confirm or deny that..." to our questions.

One thing is certain, the government is very concerned - alarmed might be a better word - about the incident. From "alternate sources" we learned that intentional satellite jamming is virtually impossible to trace. While military satellite locations and frequencies are secret, domestic broadcast satellite parameters are pretty much common knowledge. But there are ways, I was told, that Captain Midnight can be tracked down.

Officials are particularly troubled about the possibility of damage to a multimillion dollar satellite's guidance mechanism that could knock the bird "off track" and the fact that other satellite links (among them bank fund transfer systems, long distance telephone, corporate networks, national newspapers, broadcast feeds... and the like) can be maliciously interfered with or data altered.

The FCC has determined that there are about one hundred satellite uplink facilities in the United States capable of overriding HBO's signal and reportedly they are looking into the activities of each of them on the evening of April 27th.

They know that the signal did not come from the west coast. The list of possible jammers is systematically being reduced by considering known strength and amplitude of the pirate signal, amplifier power used and the fact that the uplink facility had to be out of use at that time. It is estimated that it would take someone who knew what he was doing with a 10 meter dish and 2,000 watts of RF power to overtake the HBO transponder.

We also understand that U.S. secret military satellites have the ability to observe uplinked transmissions as they move across the earth recording time, part of earth, power and type of signal they are looking at. The government (who have been provided tapes of



the incident by HBO) is "pulling out all the stops" on the Captain Midnight incident. At least one radical TVRO group (FM America) say they know who Captain Midnight is and this too is being investigated.

The incident could give added impetus to the Barry Goldwater, K7UGA, introduced anti-jamming legislation seeking to simplify procedures for dealing with individuals that maliciously interfere with authorized communications.

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## DAYTON HAMVENTION - ONE OF A KIND!

Three sunny days of glorious summer-like weather set a festive mood for the 35th anniversary of the Dayton HamVention held the last weekend in April. The overall attendance was up with Friday having a significant increase over past years. Additional buses had to be added to accomodate the crowd. Hotel rooms were sold out as far away as 50 miles from Dayton!

As always, Joe Ventolo, K8DMZ, was there passing out the special Dayton issue of his GEARVAKf Bulletin spoofing ham radio. The latest issue reports on:

...the success of the new GEARTECH transmitted voice packet radio (unfortunately no method of receiving a voice encoded packet has yet been found.)

...self-illuminated particle beam vertical antenna

...new reciprocal operating agreement with Libya

...naming and sale of kilohertz segments of the ham bands - "Beginning July 1st any GEARVAKf member can honor any friend, idol or even him/herself simply by purchasing one or more frequencies of a favorite ham band." A namebook will be marketed to aid amateurs who wish to meet schedules on named frequencies rather than the old-fashioned numbered ones".

...be prepared for a new drug testing program to be established at annual GEARVAKf AmateurRadioVention. Specimen bottles to be provided.

...packet lost and found department set up - and much more. (Copies available for \$1.00 from: The GEARVAKf Bulletin; 356 Coronado Trail; Enon, Ohio 45323.)

One of the highlights of the weekend occurred at the Saturday night banquet when Senator (and ex-astronaut) John Glenn made a surprise appearance to speak to those assembled and to congratulate Roy Neal, K6DUE, on his Ham-of-the-Year Award for his efforts in bringing amateur radio operation to the space shuttle program. Senator Glenn's sprint to the platform received a standing ovation from the over 1,000 in attendance.

The forums were well attended, with DX being the favorite followed closely by Wayne Green, contesting and packet. Approximately 200 applicants took amateur exams during the HamVention weekend. The pass rate was pretty much "average" except for the Technician/General Element 3 which was significantly lower due to a new question pool going into effect as of April 1st.

Nearly \$60,000 in prizes were given away! The top prize winners were:

- (1) Complete Kenwood 940 station:  
Lauren Rudd - KD8PZ, Rocky Hill, NJ
- (2) Complete ICOM 751A station:  
John Dust, Crestview Hill, KY
- (3) Yaesu FT-1 General Coverage Transceiver:  
Dick Loehning - N9ACP, Nanasha, WI
- (4) Yaesu FT-726R 2M/70-cm Satellite Station  
Bob Williamson - W4DHK, Louisville, KY
- (5.) Shackmaster 100 Station Controller:  
David Rosenman - KA9PMK, Muncy, IN

While the best Dayton ever in terms of flea market/commercial sales and attendance, HamVention was not without its "moments." An overloaded exhibit booth extension cord caused a minor fire with an accompanying evacuation of hundreds from one of the halls on Saturday morning. The following day saw a power transformer failure that plunged the main arena into darkness! A light plane landed in the field behind the hamfest!

You could buy just about anything in the giant flea market ....even a live hand grenade! It was eventually carefully removed from one of the selling spaces. Black box dealers were peddling decoders that supposedly could decode M/A-Com's Vidercipher II satellite descrambling technology. You name it, it was there!

[DE W5YI, See you in two weeks!]